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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,583	03/01/2002	Junshin Sakamoto	H07-139239M/NHK	8979
7590	04/16/2004		EXAMINER	
McGinn & Gibb, PLLC Suite 200 8321 Old Courthouse Road Vienna, VA 22182-3817			LUU, THANH X	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 04/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/085,583	<b>Applicant(s)</b> SAKAMOTO, JUNSHIN	
	<b>Examiner</b> Thanh X Luu	<b>Art Unit</b> 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2004.  
2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 20 and 21 is/are allowed.  
6) ☒ Claim(s) 1,3-19,22 and 23 is/are rejected.  
7) ☒ Claim(s) 2 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 08 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This Office Action is in response to amendments and remarks filed March 8, 2004. Claims 1-23 are currently pending.

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6-9 and 13-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 6, 7, it is unclear in its given context what "plurality-th" means. Nowhere in the specification does the Applicant define the term. Further, it is unclear in its given context what a "scanning direction beam" is. How is a scanning direction beam related to the plurality of laser beams? It is also unclear what it means for "a signal of a scanning direction beam of a first row or a plurality-th row detected by a light beam receiving surface of the detecting device is formed into a writing position signal on the photoconductor of the scanning direction beam of the first row." How do beams that fall on the surface of the detecting device form on the photoconductor?

Claims 8 and 9 are identical claims. One claim should be changed or cancelled.

Regarding claims 13-19, it is unclear what a "scanning direction beam" is. How is it related to the plurality of laser beams?

Regarding claim 17, it is unclear how a delay circuit obtains an advanced signal. That is, Applicant appears to be using the term "delay" in contradiction to its normally accepted definition.

Regarding claim 18, "the delayed signal" lacks proper antecedent basis.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3-5, 8-11, 22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Ito et al. (U.S. Patent 5,786,594).

Regarding claims 1, 3-5, 8-11, 22 and 23, Ito et al. disclose (see Figure 21) a two-dimensional beam writing position detecting device and method, comprising: an optical system for scanning on a photoconductor (see Figure 11A) by laser beams emitted from a semiconductor laser to form an electrostatic latent image and arranging a plurality of the laser beams (LS1-LS3) in two dimensions and slantingly scanning the plurality of laser beams at a predetermined slant angle (the three beams form an angle with the horizontal); and a detector (66) for detecting the laser beams, wherein a longitudinal direction of a beam light receiving surface (SL2) of the detecting device inclines at substantially the same angle as the slant angle (see Figure 21) as claimed. That is, as understood, since the slit and the laser beams of Ito et al. both tilt in the same direction, they are "substantially" the same angle. Ito et al. also (see Figure 21)

disclose the length as claimed. In addition, Ito et al. disclose (see Figure 21) the detecting device is partitioned, formed by a slit and a photodetector. Ito et al. further disclose (see Figure 11A) an image forming apparatus having the detecting device installed on other than a scanning line of the photoconductor. Ito et al. also disclose (see Figure 11A) the detector is disposed in a position of beam scanning that is not within a scanning width of the photoconductor.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al.

Regarding claim 12, Ito et al. discloses the claimed invention as set forth above. Ito et al. also disclose photodiodes. Ito et al. do not specifically disclose high-speed photodiodes. However, it is notoriously well known in the art to provide high-speed laser writing in such devices. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide correspondingly high-speed photodiodes in the apparatus of Ito et al. to provide effective detection of such high-speed laser beams and improve through-put.

***Allowable Subject Matter***

7. Claims 20 and 21 are allowed over the prior art of record.

8. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

9. Applicant's arguments have been fully considered but they are not persuasive.

Applicant asserts that the slant angle of the laser beams and the inclination angle of the detector of the prior art are not substantially the same. Examiner disagrees. Nowhere, in the claim is there language that states that the beams have to arrive at the same time. The claims simply state that the angles are "substantially" the same. As understood, since the slant angle of the laser beams and the angle of the slit of Ito et al. are tilted in the same direction, they are "substantially" the same.

Thus, as set forth above, this rejection is proper.

***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X Luu whose telephone number is (571) 272-2441. The examiner can normally be reached on M-F (6:30-4:00) First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thanh X Luu  
Primary Examiner  
Art Unit 2878